

REMARKS

The allowance of claims 1 and 9 is noted with appreciation. Allowable claims 8 and 31 should also now be allowed as they have been rewritten in proper independent form.

The rejections of claims 18, 22-24 and 26-30 as being anticipated by Noguchi *et al.* and of claims 7, 19-21 and 25 as being unpatentable over Noguchi *et al.* in view of Mueller under 35 U.S.C. § 103(a) are traversed. Reconsideration of each of these rejections is respectfully requested in light of the amendments to claims 7 and 18.

Claim 7 now defines the invention therein as one in which, the inclination orifice (i.e., of the injection port) is extended over into the small raised part, which is projected further from the tip end face of the nozzle portion. Thus, the inlet face of the inclination orifice provided upstream from the tip end face of the nozzle portion of the inclination orifice or the outlet face opened to the outer surface of the small raised part projecting from the tip end face of the nozzle portion is inclined against the valve seat face of the valve seat, whereby the fuel is deflected-injected. With such an arrangement, the deflection angle, the reaching distance, and the spreading angle etc. of the fuel have degrees of freedom. Consequently, even in cases where the requirement characteristics differs from vehicle to vehicle the basic constituents of the nozzle portion not to be altered to a great extent because of the valve's ability to respond in accordance with the inclination and the offset amount of the orifice, and the angles of the inlet face and the outlet face of the orifice.

Similar comments are applicable to amended claim 18. Applicants further note that since the raised part itself is formed along the center axis of the injector and only the passage is included and is offset, the processing of the injection port for deflecting the fuel can be carried out easily thereby allowing many variations to be obtained for the obtained spray characteristics. Moreover, the injection port can be provided without unnecessarily thickening the tip end of the nozzle portion.

The intermittent-type swivel injection nozzle disclosed in the Noguchi *et al.* patent, alone or in purported combination with the valve described in the Mueller patent, neither teaches or suggests the inventive subject matter of claims 7 and 18. More specifically, nothing in the Noguchi *et al.* patent teaches that the injection port has an inclination with respect to a longitudinal axis of a fuel injection valve body and its outlet is formed at the raised part, with the raised part defining a wall part of a marginal part of an outlet of the injection port, at least one of a plane face including an inlet opening of the injection port which is formed on the raised part and a plane face including an outlet injection port which opens to the raised part, is not in parallel (i.e., crosses over each other) against a seat face to which the valve body contacts. The same can be said about the teachings of the Mueller patent where there is no disclosure of deflected-injecting the fuel by providing the orifice (the injection port) in the raised part provided at the tip end portion of the nozzle portion and by inclining (arranging non-parallel) the inlet face or the outlet face of the orifice against the valve seat face of the valve seat.

Accordingly, early and favorable action on all the claims in this application is earnestly solicited.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket # 056207.44849CO).

Respectfully submitted,

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